

Attorney Docket No.: WON-0003
Inventors: Kwak et al.
Serial No.: 10/519,511
Filing Date: February 16, 2005
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

Claim 1 (currently amended): A method for high throughput screening of plant growth regulators comprising the steps of:

(a) culturing photomixotrophic cells in a microwell plate to which candidates for plant growth regulators were added;

(b) adding treating the cells of step (a) with 2,3,5-triphenyltetrazolium chloride for 4.5 to 5.5 hours;

(c) removing solutions from the microwell plate ~~and reacting the solutions with ethanol;~~

(d) adding ethanol to the remaining cells and reacting for 0.5 to 2 hours;

~~(d)~~ (e) transferring the reacted solutions of step (e) solution of step (d) into a new microwell plate; and

~~(e)~~ (f) measuring optical density of the microwell plate of step ~~(d)~~ (e) with a high throughput screening reader; and

(g) determining the activity of candidates for plant growth regulators based on the optical density of step (f).

Claim 2 (original): The method as set forth in claim 1, wherein the photomixotrophic cells are *Marchantia polymorpha* L. photomixotrophic cells or *Nicotiana tabacum* cv. BY4 photomixotrophic cells.

Claim 3 (original): The method as set forth in claim 1, wherein the candidates for plant growth regulators are selected from a group consisting of synthetic compounds,

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natural compounds, plant extracts and fractions or extracts containing microorganism culture solutions.

Claim 4-6 (canceled)

Claim 7 (currently amended): The method as set forth in claim 1, wherein step (b) is carried out by treating with 2,3,5-triphenyltetrazolium chloride for ~~4.5-5.5 hours,~~ removing solutions from microwells, adding 95% ethanol thereto, and then reacting thereof at 60°C for ~~1 hour~~ 5 hours.

Claim 8 (currently amended): The method of claim 1, wherein step ~~(e)~~ (d) is carried out by ~~removing solutions from microwells,~~ adding 95% ethanol thereto, and then reacting thereof at 60°C for 1 hour.

Claim 9 (currently amended): The method of claim 1, wherein the optical density of step ~~(e)~~ (f) is measured at 490 nm.